

AMENDMENTS TO THE CLAIMS

1. (Currently amended) In a wireless data communications system wherein data communications are provided between mobile units and a central computer via access points in accordance with a wireless communication standard protocol, the improvement wherein at least some of said access points are connected to said central computer through at least one data switching hub, and wherein said data switching hub provides the functionality of the wireless communications standard protocol that is arranged to selectively provide ~~sends~~ data communications to access points connected to said hub in accordance with destination address data in said communications, wherein at least some of the access points each provides a conduit for data communication to the mobile units independently of destination address data in said communications that identify a mobile unit.

2. (Original) The improvement specified in claim 1 wherein said data switching hub is arranged to monitor source address data in communications received from each access point connected to a port of said data switching hub, wherein said switching hub is arranged to maintain a routing list correlating said source address data with said port of said data switching hub and wherein said switching hub is arranged to use said list to selectively provide said data communications to said access points.

3-7. (Cancelled).

8. (Currently amended) A method for providing data communications between mobile units and a central computer comprising:

connecting said central computer to at least one switching hub over a wired data communications network, wherein the switching hub provides the functionality of a wireless communications standard protocol that selectively sends data communications to access points;

connecting a plurality of access points to ports of said switching hub;

associating mobile units with selected ones of said access points;

providing data communications packets on said wireless communications network, said packets including destination addresses each identifying a mobile unit;

maintaining a routing list at said switching hub relating said ports to said access points and to said mobile units associated with said access points;

operating said switching hub to relay data communications packets from said wired data communications network to said access points in accordance with said routing list and in accordance with the wireless communication standard protocol; and

relaying data communications received from said switching hub by said access points to associated mobile units by radio communications independently of the destination addresses identifying the mobile units in the data communications packets.

9. (Original) A method as specified in claim 8 wherein said access points are arranged to not relay a selected type of data communications received from said switching hub.

10. (Original) A method as specified in claim 8 further including the steps of:
providing data communications packets from one of said mobile units by radio communications to an associated access point, said packets including a destination address and a source address corresponding to said mobile unit;

relaying data communications packets received by said access points from said mobile units to a port of said switching hub; and

operating said switching hub to relay said data communications packets received from said access points to said wired data communications network or said other access points in accordance with said destination address and to update said routing list at said switching hub by relating said port of said switching hub to said source address of said data packet.

11. (Original) A method as specified in claim 10, wherein said mobile units are arranged to associate with one of said access points for radio communications therewith, and wherein said mobile units are further arranged to send a data communications message upon associated with an access point, said message causing said switching hub to update said routing list with the address of said mobile unit.

12. (Original) A method as specified in claim 10 wherein said mobile units are arranged to associate with one of said access points for radio data communications therewith, and wherein said access points are arranged to send a data communications to said switching

hub, when a mobile unit becomes newly associated with said access point, said message having a source address corresponding to said newly associated mobile unit and causing said switching hub to update said routing list with the address of said mobile unit.

13. (Withdrawn) A data communications system for providing data communications between at least one computer and a plurality of mobile units, comprising:

a plurality of access points, each arranged for providing radio data communications and having a wired data interface;

a plurality of mobile units, each arranged to associate itself with one of said access points and conduct radio data communications therewith;

at least one switching hub having a first wired data port and a plurality of additional wired data ports, each connected to said wired data interface of one of said access points; and

a wired data communications network for providing wired data communications between said at least one computer and said first wired port of said switching hub;

wherein data is communicated over said wired data communications network as data packets, each of said packets having destination address data identifying one of the mobile units and wherein said switching hub is arranged to examine said destination address data and provide said data packets to one of said additional wired ports if said destination address data corresponds on a routing list to an address associated with said one additional wired port, and wherein at least some of the access points are arranged to process the data packets independently of the destination address data.

14. (Cancelled).

15. (Withdrawn) A data communications system as specified in claim 13 wherein data is communicated as data packets from said access points via said wired data interface to one of said additional wired data ports of said switching hub, said data packets including source address data, and wherein said switching hub is arranged to examine said source address data and to associate the corresponding source address data with said one additional port on said routing list.

16. (Withdrawn) A data communications systems as specified in claim 13 wherein said wired data interface of said access points are connected to said additional wired data ports of said switching hubs over multiconductor cables, and wherein said multiconductor cables are arranged to provide power to said access points.

17. (Withdrawn) A data communications system as specified in claim 16 wherein there is provided a power supply module associated with said switching hub for providing power to said multiconductor cables.

18. (Withdrawn) In a wireless data communications system wherein there are provided access points for interconnecting mobile units in radio communications with said access points and a wired data communications network, the improvement wherein at least some of said access points are supplied with power using data communications cables of said wired data communications network, wherein at least some of the access points are arranged to forward data communications received from the wired data communication network independently of address data in said communications identifying the mobile units.

19. (Withdrawn) A distributed wireless communication system comprising:
a communication hub including a communication interface for receiving data packets each addressed to a corresponding one of a plurality of mobile units;
a plurality of access points distributed remotely from the hub, wherein each access point includes a wired communication interface for communicating with the communication hub, and a transmitter/receiver for communicating with one or more of the mobile units;
wherein the communication hub is arranged to forward each received data packet addressed to one of the mobile units to a selected one of the access points; and
wherein each of the access points are arranged to forward each data packet addressed to one of the mobile units that is received from the communication hub independently of address data in said received packet identifying said mobile unit.

20. (Withdrawn) The system of claim 19 further comprising cables each coupling the communication hub to a corresponding one of the access points, wherein each cable is coupled to

the wired communication interface at the corresponding access point for communicating with the communication hub.

21. (Withdrawn) The system of claim 20 wherein each of the cables includes conductors for carrying supply power from the communication hub to the corresponding access point.

22. (Withdrawn) A method for providing wireless access using a wireless communication system comprising a communication hub and a plurality of access points distributed remotely from the communication hub, the method comprising:

receiving at the communication hub a data packet including address data identifying a corresponding one of a plurality of mobile units;

selecting one of the plurality of access points according to the address data in the received packet;

forwarding the data packet to the selected access point; and

receiving the data packet at the selected access point and transmitting the data packet over a wireless network independently of the address data in the data packet.

23. (Withdrawn) The method of claim 22 further comprising:

powering each of the access points by passing supply power over a corresponding cable from the communication hub to the access point, wherein said cable is also used for passing data packets between the communication hub and the access point.